

Western States Fly-In Exercise June 1, 2024

The objective of this exercise is to increase our fluency with the assortment of ways in which waypoints can be specified. These include street addresses and intersections, VOR radials, and the multiple possibilities for LAT/LONG: DD°MM'SS", DD°MM.mm, and DD.dd. This is intended to be a learning experience not a test. For that reason, we're distributing the exercise in advance of the fly-in to allow everyone plenty of time to prepare and study. If you're using ForeFlight, the Tips and Help on page 3 should be useful.

Some general Rules:

- Minimum altitude for the message drop is 200 feet AGL (265 MSL)
- All targets must be photographed. It doesn't have to be Life Magazine or National Geographic quality, you just need a simple photo to prove you were there. These might also be useful if questions arise regarding the target(s).
- CAP Grid locations should include the sub-grid letter (A, B, C, or D)
- Safety is paramount. If you have any concerns or safety issues with any target(s) please skip them or terminate the exercise and return to KLVK.

1. Depart KLVK and fly to New Jerusalem Airport (1Q4) for spot landing and message drop.

Instructions and procedures for performing the spot landing and message drop will be discussed in the flight briefing.

2. Fly to 3575 Howard Rd, Westley, CA

There are a cluster of structures at this location

- a. Photo _____
- b. What are they? _____
- c. How many there are? _____
- d. What CAP Grid is the structure located in? _____

3. Fly to MOD R262 11 DME.

There is a ranch at this location.

- a. Photo _____
- b. What is the name of the ranch? (It should be obvious) _____
- c. What CAP Grid is this located in? _____

4. Fly to 37°42'28"N 121°02'57"W

There is an object on the ground at this location that has a relation to Asian philosophy.
(Hint, hunt for it across the street from the hospital complex)

- a. Photo _____
- b. What is it? _____
- c. What CAP Grid is this located in? _____

5. Find the water tower at 37.76386° -121.13515°

- a. Photo _____
- b. What surrounds the water tower? _____
- c. How many are there? _____
- d. The water tower dome is painted to look like what sports object? _____

6. Fly to 37°46.43 N 121°26.11 W

- a. Photo _____
- b. How many baseballs fields are located there? _____

7. Fly to the intersection of Newport Dr & Bixler Rd in Discovery Bay. Locate the school nearby with the colored tile roofs.

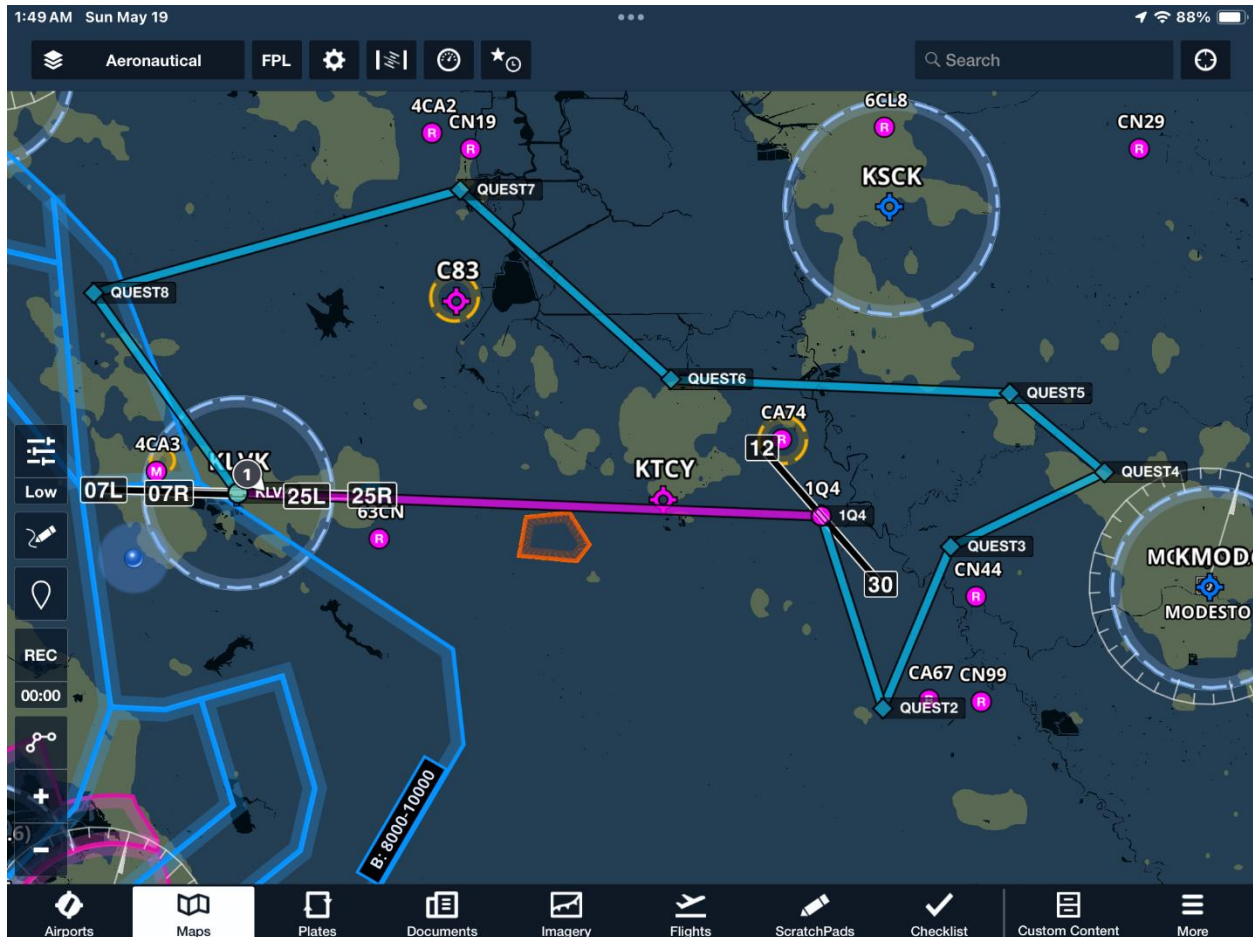
- a. Photo _____
- b. What color are the roofs? _____
- c. How many buildings have this color of roof tile? _____
- d. What CAP Grid is the school located in? _____

8. 1.5 miles SSW of the VFR waypoint VPBAB you will find the Athenian School in Danville, CA. This private school has a unique and large logo on the property.

- a. Photo _____
- b. What is the shape of the logo? _____
- c. What is the logo made of? _____
- d. Can you afford the tuition? ___ Yes ___ No (If Yes, you're buying lunch)

Foreflight Tips and Help

If you've entered the flight exercise waypoints correctly, your route should look like this:



Note:

- R-2531 Restricted airspace 12nm east of KLVK
- Skydive California CA74 and Byron C83 frequently have skydiving
- KMOD and KSCCK Class Delta airspace
- KSFO Class Bravo airspace

Using Waypoints in Foreflight

- **Waypoints that reference VORs** can only be entered directly into the flight plans.

VOR ID/3 digit radial/distance

To enter a waypoint defined by a radial and distance from a VOR, enter the waypoint *directly into the flight plan* as VOR ID/3 digit radial/distance. For example, to enter a waypoint off the Albuquerque (ABQ) VOR on the 23 degree radial at 25 nautical miles, enter the waypoint as follows: ABQ/023/25

VOR ID 3 digit radial/VOR ID 3 digit radial

Waypoints defined by crossing radial such as MOD 262 and SAC 142, can be entered *directly into the flight plan* as MOD262/SAC143

- **Waypoints that use LAT/LONG** can be entered directly into the flight plan or via custom defined User Waypoints, which can be created under *More/Custom Content/User Waypoints*.

Latitude/Longitude Entry Example

Here is an example that shows how to enter any of the supported LAT/LONG formats. For example, a waypoint such as 36°00'51"N / 75°30'04"W is in the DD°MM'SS" format. In the table below you will see that this should be entered as 360051N/0753004W.

Format	Equivalent Lat/Long Value	How It Is Entered in ForeFlight
DD.dd (with letters)	36.01°N/75.50°W	36.01N/75.50W
DD.dd (with a minus)	36.01°N/75.50°W	36.01/-75.50
DD°MM'SS" (with letters)	36°00'51"N/75°30'04"W	360051N/0753004W
DD°MM'SS" (with a minus)	36°00'51"N/75°30'04"W	360051/-0753004
DD°MM.mm (with letters)	36°00.86'N/75°30.07'	3600.86N/07530.07W
DD°MM.mm (with a minus)	36°00.86'N/75°30.07'	3600.86/-07530.07

- **Changing Foreflight LAT/LONG Display format:** Regardless of what format you use to enter a LAT/LONG, Foreflight will always show it back to you using its configured LAT/LONG display option. You can control this under *More/Settings/Units-Time/Coordinates*. Changing this display option to match your input format makes it easier to proofread and debug your entries.

CAP Grids

Foreflight can display a map overlay of the Civil Air Patrol Grid. This option can be enabled on under *More/Settings/SAR Features* and toggled on/off under ForeFlight's Layers (top left on the map page). You'll need this enabled to answer Question 3.

Street Addresses and Intersections

In Foreflight's Search box (upper right corner of the map page), you can enter things like:

- 123 S Vasco Rd, Livermore
- Main St & First St, Los Altos